

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

ROHINI KUMAR, an individual, on behalf of
herself, the general public and those similarly
situated,

Plaintiff,

Case No. 4:14-cv-02411-YGR

v.

SALOV NORTH AMERICA CORP.; and
ITALFOODS, INC.,

Defendants.

Reply Declaration

of

COLIN B. WEIR

May 10, 2016

REFERENCES MATERIALS DESIGNATED "CONFIDENTIAL" AND "CONFIDENTIAL
ATTORNEYS' EYES ONLY" UNDER PROTECTIVE ORDER

I, Colin B. Weir, declare as follows:

I am Vice President at Economics and Technology, Inc. ("ETI"), One Washington Mall, 15th Floor, Boston, Massachusetts 02108. ETI is a research and consulting firm specializing in economics, statistics, regulation and public policy.

I. QUALIFICATIONS, BACKGROUND, AND EXPERIENCE

1. I hold a Masters of Business Administration, with honors, from the High Technology program at Northeastern University, Boston, Massachusetts. I hold a Bachelor of Arts degree cum laude in Business Economics from The College of Wooster, Wooster, Ohio. I have provided expert testimony before federal and state courts, the Federal Communications Commission, and state regulatory commissions, and have contributed research and analysis to numerous ETI publications and expert testimony at the state, federal, and international levels. I have consulted on a variety of consumer and wholesale products cases, calculating damages relating to food products, household appliances, herbal remedies, health/beauty care products, electronics, and computers. Prior to joining ETI, I worked at Stop and Shop Supermarkets for a period of seven years, working as a cash department head, grocery/receiving clerk, and price-file maintenance head. This declaration supplements my earlier declaration of January 19, 2016.

II. ENGAGEMENT

2. I have been asked by Counsel for Plaintiff to review and respond to the Declaration of Keith Ugone.¹

¹ Declaration of Keith R. Ugone, Ph.D., filed March 15, 2016 ("Ugone Declaration").

3. ETI is being compensated at the rate of \$600 per hour for my ongoing work on this case. The opinions expressed in this declaration are my own, and my compensation is not dependent upon the substance of these opinions or the outcome of the litigation.

4. The documents, data and other materials that I relied upon in forming my opinions are identified throughout my report and in Exhibit 1, attached hereto. In addition, I have relied upon my educational background and more than 12 years of experience.

III. RESPONSE TO UGONE

Individual inquiry is not necessary

5. One of Ugone's central assertions is that individual inquiry is necessary in order to determine damages.² Ugone is wrong. Class-wide damages can be calculated without any individual inquiry, as I discuss in detail below.

Variations in purchase price do not alter the calculation of total, class-wide damages

6. Ugone contends that it is necessary to determine the specific price(s) individual Class members paid for the Products in order to calculate Class-wide damages.³ However, variations in purchase price do not prevent the calculation of Class-wide damages. Such variations in price are captured in the IRI actual sales data used for analysis, and analyzed by the hedonic regression model. Such variations are also inapposite to the calculation of class-wide damages, because the ultimate distribution or allocation of damages to individuals during claims administration or a settlement does not alter the calculation of total, class-wide damages.

² See, Ugone Declaration, at 12-38.

³ *Id.*, at para 39.

7. Class-wide damages can be calculated from the bottom up as the sum of individual damages (as Ugone asserts), or can be calculated from the top down, without individual inquiry, by finding the percentage price difference resulting from the "Imported from Italy" Claim and then multiplying it by the number of units or dollars sold. As outlined in the Weir Declaration, I propose to use the latter technique, obviating the need for individual inquiry.⁴

8. Ultimately, no matter the method by which damages are distributed, it does not affect the calculation of, or the total amount of class-wide damages in this litigation.

Individual interpretation of the "Imported from Italy" Claim is irrelevant to the determination of class-wide damages

9. Individual interpretation of the "Imported from Italy" Claim is irrelevant to the determination of Class-wide price premium damages here. Individual interpretations of the "Imported from Italy" Claim do not change the price paid by that individual. As such, we are dealing with a simple question: What did the Class pay for the Products as a result of Defendant's conduct of labeling its Products with the "Imported from Italy" Claim.

10. Calculating such a price premium does not depend on an individual interpretation of the "Imported from Italy" Claim because there is no middle ground. If the market price for the Products was higher as a result of the "Imported from Italy" Claim, then ALL consumers will have paid a higher price than if the Claim had not been made, regardless of their personal interpretations.

⁴ Declaration of Colin B. Weir, filed January 19, 2016 ("Weir Declaration").

Individual reasons for purchase do not change the price, or price premium paid by an individual

11. Individual reasons for purchase are irrelevant in this case, because a consumer's individual reasons for purchase do not change the price paid by that individual. Consumers do not negotiate the price of the Products at retail. Shelf prices do not adjust themselves for individual consumers.

12. _____

5

13. As I have discussed above, if there is a price premium included in the price of the Products as a result of the "Imported from Italy" Claim and consumers buy the Products, they will pay that premium regardless of their reasons for purchase, because their individual reasons for purchase do not change the price they will pay.

14. Even if a consumer bought a unit of the Products with the intention to immediately throw that Product in the garbage, the consumer has been harmed because he paid more for the Products because of the "Imported from Italy" Claim.

⁵ Deposition of Keith R. Ugone, Ph.D., April 19, 2016 ("Ugone Deposition"), at 55-56.

The diversity of reasons why a consumer may have chosen to purchase the Products is immaterial to the determination of class-wide damages

15. In his declaration, Ugone cites various reasons why consumers may have chosen to purchase the Products.⁶ Ugone draws upon a set of surveys conducted by Bauman Research & Consulting⁷ for these reasons, which include, but are not limited to, the following:

- Health Benefits
- Taste / Flavor / Quality
- Price
- Brand
- Grade Of Olive Oil
- Country Of Origin

16. First, as I discuss in greater detail below, it is noteworthy that [REDACTED]

[REDACTED] The Challenged Claim in this case, "Imported from Italy," is of course a country of origin claim. [REDACTED]

17. The diversity of reasons why consumers may have chosen to purchase the Products is in many ways orthogonal to the calculation of class-wide damages, because consumers are not limited to a single reason for purchase and because no single consumer can affect the price or attributes of the Products. A Mercedes automobile may carry a price premium both because of the Mercedes brand and because it comes with air conditioning. The presence of these two reasons for purchase and their associated price premiums are not mutually exclusive. The

⁶ Ugone Declaration, at para 25-28.

⁷ SNA-0005697-729 ("2011 Bauman Survey"); SNA-0011094-141 ("2014 Bauman Survey").

presence of one reason for purchase does not prevent the existence of other reasons for purchase or any associated price premium. A consumer that purchases this automobile will pay both the Mercedes brand premium as well as the air conditioning premium. A consumer that only wants a Mercedes but has zero desire for air conditioning will nonetheless pay the premium for air conditioning if they make the purchase of this example vehicle.

18. These circumstances are the same in the olive oil market, and are reflected by the Bauman surveys: an individual consumer may make the decision to purchase a product for a variety of reasons. That a consumer may desire and pay a premium for the Filippo Berio brand does not prevent there from being a premium associated with the "Imported from Italy" Claim. As I discuss above, even if this individual consumer does not rely upon the Claim, if there is a marketplace premium associated with the Claim, the consumer will pay that premium because they cannot individually negotiate the price of the Products.

19. With that in mind, the hedonic regression model originally set forth in the Weir Declaration and below, acknowledges and controls for all the above factors, as well as others, and isolates the price premium attributable to just the "Imported from Italy" Claim.⁸ Table 1, below, displays the list of the variables controlled for in my preliminary regression model organized by the reasons why consumers decide to purchase olive oil as specified in Ugone's declaration. Note that in this section of his report, Ugone fails to acknowledge several important variables including size and container type, as reasons why a consumer might choose to purchase the Products.

⁸ See, Exhibit 3 of Weir Declaration.

Table 1.	
Variables Included in Preliminary Hedonic Regression Model	Consumer Reasons for Purchase Specified by Ugone
Price Per Unit Ounce	Price
Promotional Price	
Brand	Brand
California	Country Of Origin
Italy	
Imported	
Mediterranean	
Spain	
No Geography Claim	
Extra Virgin	Grade Of Olive Oil
Extra Light	
Olive Oil	
Garlic	Taste / Flavor / Quality
Butter	
Fruit	
No Flavor	
Natural/All Natural	
No Natural/All Natural Claim	
Organic	
No Organic Claim	
No Cholesterol	Health Benefits
Cholesterol Free	
No Cholesterol Related Claim	
Size (Total Ounces)	Not Specified by Ugone
Plastic Bottle	
Glass Bottle	
Plastic Jug	
Tin	
Time	
Sources: Weir Declaration; Ugone Declaration.	

Ugone's interpretation of the results of the Bauman surveys is flawed

20. Contrary to Ugone's characterization, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].⁹

21. Ugone asserts that the Bauman surveys indicate that the relative importance of "Country of Origin" claims has been decreasing over time.¹⁰ He bases this assertion on a sleight-of-hand comparison of two incomparable statistics from the March 2011 study and the March 2014 study. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].^{13,14} In his declaration,

Ugone compares these survey responses (38% versus 7%) and concludes that "the relative importance of this variable [country of origin] has been decreasing over time."¹⁵ Anyone with even casual training in survey research or statistics would know that a comparison of responses

⁹ Ugone Declaration, at 15; SNA-0011127 (2011 Bauman Survey); SNA-000S720 (2014 Bauman Survey).

¹⁰ Ugone Declaration, at 15.

¹¹ SNA-000S719 (2011 Bauman Survey).

¹² SNA-0011123 (2014 Bauman Survey).

¹³ *Id.*

¹⁴ It should be noted that an attribute need not be the top, or even in the top group of attributes in order to sustain a price premium.

¹⁵ Ugone Declaration, at 15.

to two vastly different questions cannot provide any scientifically or even generally meaningful evidence. Ugone's analysis of the survey results is likewise unscientific and cannot provide any meaningful insight into whether olive oil consumers in 2011 cared more or less about country of origin than olive oil consumers in 2014.

22. If anything, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] These

results alone demonstrate that Ugone's assertion that the relative importance of "County of Origin" Claims has been decreasing over time is extremely flawed. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] which further contradicts

Ugone's interpretation of the survey results.

March 2011 Bauman Survey		
[REDACTED]	[REDACTED] [REDACTED]	[REDACTED] [REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED] [REDACTED]	[REDACTED]
[REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED]	[REDACTED] [REDACTED]
March 2014 Bauman Survey		
[REDACTED]	[REDACTED] [REDACTED] [REDACTED]	[REDACTED] [REDACTED] [REDACTED]
[REDACTED]	[REDACTED] [REDACTED]	[REDACTED] [REDACTED]
[REDACTED]	[REDACTED] [REDACTED]	[REDACTED] [REDACTED]
[REDACTED]	[REDACTED] [REDACTED]	[REDACTED]
[REDACTED]	[REDACTED] [REDACTED]	[REDACTED]
[REDACTED]	[REDACTED] [REDACTED]	[REDACTED] [REDACTED]

Sources: SNA-0005697-729 (2011 Bauman Survey); SNA-0011094-141 (2014 Bauman Survey).

Individual valuations of the Products or the "Imported from Italy" Claim are irrelevant to the determination of class-wide damages

24. Ugone attempts to link individual reasons for purchase and/or individual perceptions about the Products to individual valuations of the Products.¹⁶ Whether a consumer derived some

¹⁶*Id.*, at para 39.

value or no value from the Products or "Imported from Italy" Claim does not change the fact that the consumer has been harmed because she paid more for the Products because of the "Imported from Italy" Claim. Even if the consumer valued the Product at more than the price she paid, the consumer would have received even greater value had she paid less for the Products by avoiding the "Imported from Italy" price premium.

The price of Olive Oils can be affected by product differentiation

25. The Ugone declaration asserts that my analysis in this litigation relies on a theory of so-called "fraud on the market."¹⁷ This ignores a very basic economic principle: product differentiation.

26. Product differentiation is a pervasive concept in economics and marketing. As set forth in the Weir Declaration, the concept of product differentiation can be summarized as the introduction of product attributes that allow consumers to differentiate between otherwise similar products, with the goal of increasing sales and profits.¹⁸ Economic research has shown that "[i]n many industries [...] products are typically heterogeneous or differentiated: Consumers consider products or brands of various firms to be imperfect substitutes;" furthermore, "[i]f consumers view brands in an industry as imperfect substitutes, a firm may raise its price above that of its rivals without losing all its customers."¹⁹ This is the very heart of this case: did Defendant's differentiation of its Products allow for and result in the increase of price, and was that differentiation false, deceptive, unfair, or misleading?

¹⁷*Id.*, at para 29.

¹⁸ Weir Declaration, at 3.

¹⁹ Carlton, D. W. & J. M. Perloff, *Modern Industrial Organization* (2nd ed.). New York: HarperCollins College Publishers, 1994 ("Carlton & Perloff"), at 281.

27. As discussed above, if Defendant's differentiation of the Products with the "Imported from Italy" Claim caused the market price of the Products to increase, all purchasers will be harmed because they will all have paid the price premium for the olive oils.

28. Despite the fact that Ugone seemingly ignores the concept of product differentiation in his declaration, based on his deposition it appears that Ugone and I agree that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

29. When asked at his deposition whether firms typically engage in product differentiation, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

30. Furthermore, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²⁰ Ugone Deposition, at 103-104. [emphasis supplied, objections omitted]

[REDACTED]

31. The concept of product differentiation dovetails with Defendant's own internal research (as discussed above), which concludes that [REDACTED]

[REDACTED]²² Defendant's research also concluded that, [REDACTED]

[REDACTED]²³ By labeling the Products as "Imported from Italy," Defendant sought to increase demand and price for the Products at issue here.

32. It is my opinion that the Court need not evaluate the conditions of fraud on the market in this litigation, because a different economic principle--product differentiation--explains how and why the "Imported from Italy" Claim can have a market wide effect on price. However, should the Court decide to examine the conditions of "fraud on the market" in the context of this litigation, it is my opinion that the conditions necessary to permit fraud on the market²⁴ are satisfied in the market for consumer olive oils.

Ugone and I both agree that hedonic regression is one methodology an economist could use to measure the price premium associated with a particular product attribute

33. During his deposition, Ugone makes it clear that [REDACTED]

²¹ *Id.*, at 12. [objections omitted]

²² Bates No. SNA-0005697 *et seq.*, at SNA-0005700; Weir Declaration, at 5.

²³ Bates No. SNA-0011094 *et seq.*, at SNA-0011097, SNA-0011127.

²⁴ See, e.g., Efficient Capital Markets: A Review of Theory and Empirical Work, Fama, Eugene, *The Journal of Finance*, Vol. 25, No. 2, Papers and Proceedings of the Twenty-Eighth Annual Meeting of the American Finance Association New York, N.Y. December, 28-30, 1969 (May, 1970), pp. 383-417.

[REDACTED] In fact, Ugone appears to agree
with me that [REDACTED]

[REDACTED]

[REDACTED]

34. When asked at deposition whether hedonic regression is a valid methodology to
isolate the price premium of a product attribute, [REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]²⁵

35. In his deposition, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]

²⁵ Ugone Deposition, at 15-16.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

36. Ugone and I are in agreement that there is nothing exceptional about this litigation which would prevent the use of hedonic regression to evaluate Filippo Berio olive oils.

Variation in retail prices due to size and promotional activity

37. In his declaration, Ugone raises the criticism that retail prices of olive oil vary across both product size and across promotional activity. This criticism is immaterial, as my regression model is designed to control for differences in size, promotional activity, and many other product attributes. As set forth in the Weir Declaration, my preliminary regression model is specified to control for size and promotion.²⁸ In order to control for size, the dependent variable of the regression model is specified as price per unit ounce, which normalizes the price of oil olive across various container sizes. In addition, total ounces is specified as an independent variable. My preliminary regression model also includes a categorical²⁹ (dummy)³⁰ variable which identifies and controls for any sales that were made on promotion.

²⁶ *Id.*, at 19. [objections omitted]

²⁷ *Id.*, at 102.

²⁸ See Exhibit 3of Weir Declaration. See also Weir Declaration, at para 40.

²⁹ A single variable would be something like size, whereas a categorical variable would be something like brand,

Variation in retail prices across retailers and sub-geographies

38. Ugone criticizes my regression analysis for failing to control for specific retailers, and geographic differences within California, which he believes may lead to an overstatement of my "Country of Origin" price premium estimates.³¹ This criticism is a non-issue for two reasons. First, the IRI sales data I use in my analysis is state-wide data and therefore encompasses the individual sales channels and sub-geographies which Ugone discusses in his declaration. The state-wide all-retailer estimate of the "Country of Origin" price premium for all of California provides a robust estimate of the premium paid by the totality of the Class, in the aggregate. Second, statewide, all-retailer IRI data matches the Class considered in this case and as such, it is entirely appropriate to calculate damages at the state level, across retailers for purposes of a statewide Class. Thus, differences in retail prices have no effect on Class-wide damages. Regardless of the geographic scale or retailers in the markets being considered in this litigation, the hedonic regression framework is applicable.

39. Furthermore, Ugone has no evidence that failing to control for these factors would meaningfully affect the results of my regression model. When asked at deposition whether he had investigated the effect of controlling for geography and retailers on my regression model,

[REDACTED]

[REDACTED]

where each observation would have a separate variable indicating whether the Product was or was not each of the brands in the model.

³⁰ "Dummy" variable is a term of art in econometrics (and is not used in a pejorative sense), referring to a variable that takes the value 0 under one condition, or 1 in the alternate. The "Imported from Italy" Claim will be coded as a dummy variable, where each observation will be coded as 1 if the products makes an "Imported from Italy" Claim and 0 if it does not.

³¹ Ugone Declaration, at para 40.

[REDACTED]

[REDACTED]

[REDACTED]³²

40. Although it may not be necessary to control for differences in retailers and geography to determine Class-wide damages, Ugone admits that retail and geographic differences, among other differences, could easily be controlled for in a hedonic regression model if deemed appropriate. When asked at deposition whether it is possible to control for differences in retailers, sales channel, package size, timing, promotional sales, and geography in a regression model, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]³³

³² Ugone Deposition, at 153.

³³ *Id.*, at 152.

41. Although Ugone and I may disagree on whether or not it is necessary to control for differences in retailers and geography, we both agree that the preliminary regression model could easily be modified to control for these factors.

A "before and after" price comparison is not a valid method of determining a price premium in this litigation

42. Ugone's simple "Before and After" comparison of prices is inappropriate and provides no information about the effect of removing the "Imported from Italy" Claim, holding all else constant.

43. Ugone erroneously asserts that a comparison of prices of Filippo Berio Olive Oil before and after the "Imported from Italy" Claim was removed from the Products' labels is a sufficient method by which to determine the effect of the Claim on the price of the price of the Products.³⁴ However, just as Courts have generally rejected the concept of determining damages by comparing two products side-by-side without controlling for other factors, it would be inappropriate to compare a product side-by-side "before and after" a change without controlling for other elements of the product or circumstances that may have changed at the same time-- which Defendant has failed to do here.

44. Ugone acknowledges in his Declaration and Deposition that [REDACTED]
[REDACTED]³⁵ Instead Defendant made other changes to its label at the same time, including *replacing* the "Imported from Italy" Claim with a different "Imported" claim.³⁶ This type of labeling change typically confounds "before and after" analysis, because there are at least two effects happening at one time: the removal of one element

³⁴ Ugone Declaration, at para 53.

³⁵ Ugone Declaration, at para 53; Ugone Deposition, at 159, 164.

³⁶ *Id.*

of the label, and the addition of a new element to the label. Without controlling for the new additions to the label, as well as other factors, Ugone cannot infer anything about the standalone value of the "Imported from Italy" Claim. And Ugone did not make any such controls.

45. Furthermore, despite emphasizing the importance of "wide variations" in price across a number of dimensions such as Sales Channel and Promotional Activity, Ugone compares his "before" results with his "after" results without making a single control for any of these factors. In his "before and after" analysis, Ugone fails to control for the following factors, which he himself claimed were material:³⁷

- Sales Channel
- Promotional Activity
- Geographic Location
- Advertising

Ugone completely ignores these factors, and others, in his analysis. Other variables that may impact the of a "before and after" analysis include the price of competitive olive oil products and the market share of other competitive olive oil products. My preliminary hedonic regression controls for both the price and market share of competitors' olive oils.

46. Ugone cannot have it both ways. The fact that Ugone chose to ignore his own criticisms when conducting his own "before and after" analysis demonstrates that either his criticisms of my analysis are not material to the litigation, or that his own analysis is itself unreliable.

Grouping of the challenged Claim with the other Italy-Related Claims

47. Ugone claims that I made unreasonable judgment calls in that I categorized similar claims, including so-called "Italy" claims, made on olive oils and that I used the wrong

³⁷ Ugone Declaration, at para 52.

independent variable for the "Imported from Italy" Claim.³⁸ This criticism is unwarranted, as categorization of similar attributes in hedonic regression, and in any econometric application, is a routine exercise performed by economists and statisticians, and in this litigation, comports with Plaintiff's theory of liability.

48. Ugone's first mistake is that he ignores Plaintiff's basic theory of liability, which is that reasonable consumers would be misled by the "Imported from Italy" Claim to believe that an olive oil was in fact, made in Italy from Italian olives. By suggesting a segregation of "Italy" claims based upon supposedly different interpretations, Ugone has effectively proclaimed that Plaintiff will not prevail on her theory of liability. This is an inappropriate misstep in a damages analysis. As noted in the Reference Manual on Scientific Evidence, "In almost all cases, the damages expert proceeds on the hypothesis that the defendant committed the harmful act and that the act was unlawful."³⁹ My model, and the grouping of various claims including "Imported from Italy" is guided by Plaintiff's stated theory of liability, and the assumption that liability will ultimately be established.

49. Next, Ugone wrongly asserts that grouping together similar label claims is simply inappropriate in hedonic regression. As an economist, Ugone must know that the variables in a regression are by their nature representative, and that any meaningful data analysis requires some level of abstraction. For example, when economists estimate the income gap between men and women using a regression model, it is common to control for educational differences, because educational attainment affects income and is likely to be correlated with gender. In order to control for educational attainment a researcher might include a dummy variable to indicate whether or not a person graduated from high school and another dummy variable to indicate

³⁸ *Id.*, at 39-45.

³⁹ Reference Manual on Scientific Evidence, at 432.

whether or not a person graduated from college.⁴⁰ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

50. The logic behind grouping data should be clear to anyone who conducts empirical research. For example, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

51. Ugone has ignored the economic literature on the grouping of related claims as well as the Bauman studies (which Defendant has relied upon) [REDACTED]

[REDACTED] Not only is it common to group certain data from survey participants, in the hedonic regression literature it is common to group together like product attributes into a single variable describing those attributes. For example, in an economic study of breakfast cereals and nutritional characteristics, the econometrician describes a variable "VIT" which accounts for the presence of six different vitamins in cereals: vitamin A, vitamin C, thiamine, riboflavin, niacin, and iron. The researcher also describes a variable "NAT", a dummy variable that captures the

⁴⁰ Stock, J. H. & W. W. Watson, Introduction to Econometrics (3rd ed.). Boston: Addison-Wesley, 2011 ("Stock & Watson"), at 302-303.

⁴¹ In the 2014 study respondents also had the option of indicating that they "Prefer not to answer."

⁴² 2011 Bauman Survey, at SNA-000S727. 2014 Bauman Survey, at SNA-0011139.

effect of any natural claims made by cereal manufacturers.⁴³ Both of these variables, among others, are included in the final regression models used to evaluate consumer demand for vitamin content and natural representations made by cereal manufacturers. In the market for cereals, natural claims vary just as "Country of Origin" Claims do in the market for olive oil, yet in this study the variable "NAT" is considered appropriate to capture the price premium for a natural cereal.

52. The grouping together of various "Country of Origin" Claims made by manufacturers is common sense, common practice, and is supported by the economic literature on consumers perception of such Claim. For example, researchers in Toronto conducted a conjoint survey of extra virgin olive oil products with various attributes to participants in order to understand their preferences for olive oils from "Italy," "Greece," "Spain," and other geographic regions. The authors' findings indicate that consumers prefer Italian olive oils over Spanish or Greek oils, consumers are likely to pay substantial premium for Italian olive oils, and that "consumers [do] not prefer Greek over Spanish or vice versa."⁴⁴ Furthermore, their findings also indicate that Canadian consumers pay significantly less attention to more granular geographic information, such as the region within a country where an oil is produced, than to the country of origin claim. This study highlights the fact that it is not necessary to breakdown product attributes into more specific categories.

53. Another study discusses that there are numerous methods that companies can use to signal the country of origin ("COO") of a product, but what matters is the apparent country of origin itself, rather than the specific method by which that country is communicated. "Most obviously, companies can only benefit from the COO if customers are aware of it. Companies

⁴³ *Hedonic Prices for a Nondurable Good: The Case of Breakfast Cereals*. Stanley, L. R. and John T. Tschirhart, Review of Economics and Statistics 73.3 (1991):537-541, at 538.

⁴⁴ *Consumers' Preferences for Geographical Origin Labels: Evidence from the Canadian Olive Oil Market*. Menapace, Luisa, *et al*, European Review of Agricultural Economics 38(2) (2011):193-212, at 206.

are therefore seeking to communicate the COO and to increase their customers' COO awareness with a number of different strategies."⁴⁵ The study finds that "the country-of-origin (COO) is considered to be a significant cue in consumer choice behavior because it has a significant effect on consumer product evaluation."⁴⁶ This study also concludes that "Generally, consumers are ready to spend more money for a branded product from a COO with a more favorable country image. This can be explained by the fact that the COO is often interpreted by consumers as a signal of quality and is used to prevent information overload in the purchase decision process."⁴⁷

54. [REDACTED]

[REDACTED]
[REDACTED] Table 3, below, shows that the decision to group "Country of Origin" Claims in my preliminary regression model is not only consistent with the economic literature but is also consistent with the grouping of [REDACTED], which Defendant has relied upon in the normal course of its business.

⁴⁵ Country-of-origin marketing: A list of typical strategies with examples, Thomas Aichner, Journal of Brand Management (2014) 21, 81–93.

⁴⁶ *Id.*

⁴⁷ *Id.*

Sources: SNA-0005697-729 (2011 Bauman Survey); SNA-0011094-141 (2014 Bauman Survey); Weir Declaration.

55. As explained in the Weir Declaration, the explanatory variables included in my preliminary regression model were not chosen arbitrarily, rather they were carefully chosen after a review of Defendant's marketing materials, economic literature and other third party sources.⁴⁸ Ugone asserts that the "Country of Origin" Claims included in the regression model should have been broken apart, however he does not cite even one single authority to support his claim.

56. It comes as no surprise that Ugone's exercise of breaking the "Italy" country of origin claim into sub-variables returns nonsensical and statistically insignificant results. First, as I have just described, the grouping of the claims is actually the economically correct approach. Second, by dividing the claims, Ugone is guilty of "overfitting" the regression model, by including too many variables seeking to explain the same phenomenon.

57. The econometrics literature has long recognized the tradeoff between omitting potentially relevant variables and including potentially irrelevant variables, or simply too many variables. Econometrics expert Peter Kennedy describes the over inclusion of variables in a

⁴⁸ See generally Weir Declaration.

regression model as a "kitchen sink" strategy.⁴⁹ Though not necessarily intuitive, when too many variables are included in a regression model, the regression estimates will have high variances which actually leads to results that are less precise.⁵⁰ In other words, grouping variables, or using fewer variables, often actually leads to more robust results. In his deposition, Ugone actually describes, albeit briefly, [REDACTED]

██████████

[illegible]

58. Only two of the eight Italy-related variables proposed by Ugone are statistically significant at the 5% level. This result should have caused Ugone to question both whether or not he had overfit the model and whether or not his theory that consumers are generally able to discern the difference between similar Italy-related Claims was realistic in the first place.

59. As guidance in instances where overfitting might be problematic, Kennedy suggests that "[t]he first and foremost ingredient in a search for the correct set of explanatory variables is

⁴⁹ Kennedy, Peter., *A Guide to Econometrics* (5th ed.), Cambridge: MIT Press, 2003, at 108.

⁵⁰ Greene, William H., *Econometric Analysis* (7th ed.), Prentice Hall, 2012, at 98; Kennedy, at 108.

⁵¹ Ugone Deposition, at 181-182. [emphasis supplied]

economic theory."⁵² In the case of consumer preferences for olive oils, the economic literature cited above and in the Weir Declaration suggests that when consumers evaluate olive oils on the basis of their country of origin they mainly pay attention to the country specified on the bottle, not to more granular geographic information or the specific strategy by which the country of origin is communicated. Therefore, it is entirely appropriate to group "Country of Origin" Claims together as I have done here.

60. Ugone's analysis also suffers because of the way he defines the variables that he uses for the various "Italy" representations. Ugone suggests that the key distinction is whether or not an olive oil is actually made in Italy from Italian olives, regardless of the precise labeling. But rather than classify olive oils by identifying their actual country of origin, Ugone's classifications are based on a reading of the label--just as a consumer would in the marketplace-- and on an unproven assumption that all of the labels are a) truthful, and b) that only those that say 100% Italian or Product of Italy could be truly Italian, while assuming that those that say "Imported from Italy" are uniformly not Italian at all. If Ugone was truly concerned about the cost of goods sold ("COGS") of "actual Italian olive oil," he would need to make classifications based upon the actual COGS, or at least an actual analysis of the provenance of the oils, rather than a reading of the labels, which he has not done. Grouping actual Italian oils and non-Italian oils in his re-labeling exercise renders Ugone's analysis useless for its stated purpose, and instead affirms the use of grouping of "Italy Claims."

61. Finally, Ugone chose only to separate Italy-related Claims, however, contrary to his position on the grouping of attributes, Ugone failed to separate other grouped olive oil attributes such as "Cholesterol Free" and "Natural." Ugone's decision to group some variables and separate others is inconsistent with his own (unsupported) argument that each labeling statement has its

⁵² Kennedy, at 108.

own distinct meaning and therefore should be identified by a unique variable in a hedonic regression model.

62. Lack of precision of the estimates due to high variance, lack of any economic theory to support breaking apart the "Italy" Claim into several "Italy-Related" variables, lack of purported analysis of the actual provenance of olive oils, and arbitrary grouping of some, but not all "Italy" claims explains the erroneous, and in some cases statistically insignificant, results Ugone obtains when he modifies my preliminary model to include several "Italy-Related" Claims.⁵³ It is no surprise, as I discuss below, that Ugone himself disclaims his own alternate results as not being correct. As such, these "adjusted" results should not be afforded any weight.

The results of Ugone's "adjustments" to my model are not intended to be "right"

63. At a high level, Ugone makes several "adjustments" to my proposed model, and presents the results of the model when rerun with these changes. I will discuss these adjustments, and why they should not be made, in detail below. It is important to note however, that Ugone does not himself believe that these adjustments are proper, "right," or produce meaningful results. In fact, [REDACTED]

[REDACTED]

[REDACTED]⁵⁴ [REDACTED]

[REDACTED]

[REDACTED] As such, they should be afforded no weight.

⁵³ See Table 7 of Ugone Declaration, at 44.

⁵⁴ Ugone Deposition, at 115.

It is not economically appropriate to divide the price premium attributable to the "Imported from Italy" Claim based upon interpretation, but it is possible to do so if required by the law

64. Defendant asserts that there is a parallel between this case and another case, *In re: ConAgra Foods*--where I also served as an economic and survey expert, suggesting that it would be necessary to determine damages by first calculating a price premium attributable to the "Imported from Italy" Claim, and then subdividing that premium into subcomponent parts according to consumer interpretation of the Claim.⁵⁵ In that case, Plaintiff alleged that certain Wesson oil products that were labeled as being "Natural" were in fact not natural specifically because the oils contained genetically modified organisms ("GMOs"). I understand that Plaintiff believes that this case is legally distinct from *ConAgra*, and should not be viewed in the same light.

65. The economically appropriate measure of damages in this litigation is the full price premium attributable to the Claim. However, should this Court determine that as a matter of law only a fraction of that premium should be used--for example, to determine which fractions of the premium are attributable to (a) the country where the olives are grown, (b) the country where the oil is extracted and (c) the country where the oil is bottled, it is possible to determine these fractions using the same economic tools that I proposed, and the Court accepted, in *ConAgra*, namely: a dual approach using both hedonic regression and a survey technique such as conjoint analysis.

66. In my opinion, as a matter of economics, the individual meaning any one consumer ascribes to the Claim is irrelevant to this analysis because their individual subjective belief does not alter the market price of the Products nor does their individual subjective belief alter the amount they paid for Products at retail. Regardless of whether an individual consumer believed

⁵⁵ Defendant's Opposition to Motion for Class Certification, at 20-21.

"Imported from Italy" meant that the Products were made in Italy, that they were simply shipped from an Italian port, or even nothing at all, that individual consumer still paid more for the Products because of the presence of the Claim on the label because it is the market as a whole, and not the individual consumer, that determines the retail price of the Products.

67. The "Imported from Italy" Claim is a binary "yes or no question" -- the label either says it or it does not. Calculating a price premium does not depend on interpretation of the label. As such, my goal was to demonstrate a methodology that is capable of determining the premium caused by the presence of the Claim on the Products. My hedonic regression has done just that.

68. In the event that the Court finds that additional inquiry is required to determine what portion of this price premium is attributable to an interpretation of the Claim as meaning only made in Italy from Italian olives (an exercise that I believe is not the appropriate way to measure economic damages in this litigation), the hedonic regression methodology and results are still valid and useful in this litigation: the "Imported from Italy" price premium need only be apportioned as between that interpretation and other interpretations of the claim using a technique such as conjoint analysis.

Ugone's claim that price premiums vary over time is not supported by any statistical test

69. Ugone argues that the results of my preliminary regression model are unreliable because price premiums vary over time.⁵⁶ Ugone supports this claim by dividing up the data and running five separate regressions using data from different time periods.⁵⁷ The result of this exercise is that Ugone obtains a wide range of estimates for the various price premiums associated with the "Italy" Claim and grade of olive oil (i.e. olive oil, extra light, and extra virgin). However, Ugone's method of comparing separate regression models is a false test of the

⁵⁶ Ugone Declaration, at para 80.

⁵⁷ See Table 9 of Ugone Declaration, at 52.

reliability of my model. In order to test whether or not the estimates of the five separate regressions are in fact statistically different, Ugone should have conducted what is known in econometrics as a Chow test. A Chow test is a statistical test that can be used to determine whether the difference between regression coefficients across separate groups of data is statistically significant.⁵⁸ For purposes of explanation, suppose I wanted to test whether or not the effect of educational attainment on personal income is different for men and women. I could obtain both income and educational data on a sample of men and women and run two separate regression models, one for males and one for females, using income as the dependent variable and years of schooling as an independent variable. The following equations represent these two simple regression models:

$$Income_M = \beta_0 + \beta_1(Schooling_M)$$

$$Income_F = \alpha_0 + \alpha_1(Schooling_F)$$

After running these regressions, it is highly likely that the coefficient estimate I obtain for the coefficient on years of schooling for men (β_1) is different from the coefficient estimate I obtain for years of schooling for women (α_1). However, just because the coefficient estimates appear to be different does not necessarily mean that the two estimates are statistically different. The correct way to test whether or not α_1 is statistically different from β_1 (in mathematical terms if $\alpha_1 \neq \beta_1$) is by using a Chow test.

70. To demonstrate why Ugone's comparison of regression results does not support the conclusion that price premiums vary over time, I have recreated the results of Ugone's five separate regressions, from Table 9 of his report, and have conducted three Chow tests -- one for each price premium. The results of this analysis are displayed in Table 4 below.

⁵⁸ "The Chow test [...] is used to test whether or not a parameter or parameters are unchanged from one data set to another", Kennedy, at 114.

Table 4.

Premium from Extra Virgin/Italy over Extra Virgin/None				
Ugone's Separated Regression Models	Coefficient	T-Statistic	Price Premium	Price Premium Factor
2010 (Q2 to Q4)				
2011				
2012				
2013				
2014 (Q1 to Q2)				
Chow Test Chi-Squared Statistic	P-value	Test Result		
		No statistically significant difference between coefficients.		
Premium from Extra Light/Italy over Extra Light/None				
Ugone's Separated Regression Models	Coefficient	T-Statistic	Price Premium	Price Premium Factor
2010 (Q2 to Q4)				
2011				
2012				
2013				
2014 (Q1 to Q2)				
Chow Test Chi-Squared Statistic	P-value	Test Result		
		No statistically significant difference between coefficients.		
Premium from Olive Oil/Italy over Olive Oil/None				
Ugone's Separated Regression Models	Coefficient	T-Statistic	Price Premium	Price Premium Factor
2010 (Q2 to Q4)				
2011				
2012				
2013				
2014 (Q1 to Q2)				
Chow Test Chi-Squared Statistic	P-value	Test Result		
		No statistically significant difference between coefficients.		

The Chow tests indicate that the price premiums associated with each grade of olive oil and the "Italy" Claim are not statically different across models. This result means that although the estimated price premium for regular olive oil with an "Italy" Claim is approximately [REDACTED] using data from 2010 and approximately [REDACTED] using data from 2011 for example, these price premiums are not statistically different, especially in light of the context of determining a Class-wide price premium that covers a definite multiyear, rather than single year time period. Therefore, Ugone is simply wrong to make the claim that price premiums vary over time -- the statistical evidence indicates otherwise.

Ugone's conclusions about the impact of the inclusion of "Cold Pressed" on price premium estimates is based on inaccurate data

71. Ugone claims that my preliminary regression model suffers from omitted variable bias because I did not include the variable "Cold Pressed" in my analysis. Ugone's claim is incorrect. There is sound evidence that suggests "Cold Pressed" should not be included as an explanatory variable in the regression model.

72. Ugone admits in his report "all extra virgin olive oils are cold pressed during the production process."⁵⁹ At his deposition, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁵⁹ Ugone Declaration, at para 82.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]⁶⁰

73. Because all extra virgin olive oils are cold pressed in production, the variables "Cold Pressed" and "Extra Virgin" cannot be included in the same regression model, because the inclusion of one of these variables accounts for the effect of the other.⁶¹ Knowing that both variables cannot be included in the regression model, Ugone argues that not all extra virgin olive oil products indicate they are cold pressed on their labels. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] despite the fact that at deposition he recognizes all extra virgin olive oils are cold pressed regardless of whether or not their labels indicate as much:

[REDACTED]

[REDACTED]

[REDACTED]

⁶⁰ Ugone Deposition, at 145-146.

⁶¹ This is known in econometrics as perfect multicollinearity.

[REDACTED]⁶²

74. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶² Ugone Deposition, at 146-147.

⁶³ *Id.*, at 137.

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]⁶⁴

75. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶⁴ *Id.*, at 157-158.

Table 5.			
	UPC	Ugone's "Cold Pressed"	Corrected "Cold Pressed"
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Source: [REDACTED] Product Labels.			

76. Regardless of whether "Cold Pressed" should be included in the regression model, after the "Cold Pressed" variable is corrected to reflect actual olive oil label data, inclusion of "Cold Pressed" has a negligible effect on the estimated price premiums.

Table 6.				
Claim	Coefficient	T-Statistic	Price Premium	Price Premium Factor
Regression Model Excluding "Cold Pressed"				
Extra Virgin/Italy (vs. Extra Virgin/Non-Italy)				
Extra Light/Italy (vs. Extra Light/Non-Italy)				
Olive Oil/Italy (vs. Olive Oil/Non-Italy)				
Regression Model Including "Cold Pressed"				
Extra Virgin/Italy (vs. Extra Virgin/Non-Italy)				
Extra Light/Italy (vs. Extra Light/Non-Italy)				
Olive Oil/Italy (vs. Olive Oil/Non-Italy)				
Source: [REDACTED]				

77. [REDACTED]

[REDACTED]

[REDACTED] This result, combined with the fact that there is no theoretical basis to include a "Cold Pressed" variable in the model (and that there is a theoretical basis to *exclude* cold pressed, given that all extra virgin olive oils are cold pressed) demonstrates that Ugone's critique of the model based on the exclusion of "Cold Pressed" is misplaced.

It is not necessary, and indeed inappropriate, to control for advertising in a hedonic regression

78. In his Declaration, Ugone suggests that it is a failure that my hedonic regression did not control for advertising.⁶⁵ Ugone's criticism seems to stem from recent court decisions that

⁶⁵ Ugone Declaration, at para 85.

discuss advertising in regression analysis. However, as I discuss below, this criticism is misplaced as it relates to hedonic regression.

79. The court in *Brazil* seems to latch on to Dr. Capp's initial "promise" to account for advertising in his damages model, and subsequent "failure" to do so. However, Dr. Capps suggested that he would control for advertising in a "Before and After" regression model that was studying the effect of the "Natural" labeling Claim on the amount of sales and made no such "promise" about controlling for advertising in a hedonic regression model studying changes in price. While both types of regressions share some common traits, and at a theoretical level seek to answer the same question, the inputs to a hedonic pricing model are almost certain to be different than that of a "Before and After" sales model. Advertising is just such a difference. It is not appropriate to control for advertising in a hedonic model.

80. A review of the economic literature shows that the vast majority of hedonic regression analyses (See, e.g., Weir Declaration literature review) do not account for advertising expenditures. This is not a matter of omission by well meaning academics. US government agencies routinely conduct hedonic analyses without controlling for advertising. (See, e.g., Developing a Hedonic Regression Model For Refrigerators in the U.S. CPI, Shepler, Nicole, October 16, 2001, available at <http://data.bls.gov/cgi-bin/print.pl/cpi/cpirfr.htm>) I note that Ugone himself does not (and probably cannot) cite even a single hedonic regression study that controls for advertising.

81. For the purposes of this litigation, it is not necessary, and indeed would be improper, to separately account for advertising expenditures in a hedonic regression because the hedonic regression methodology already incorporates the potential effects of advertising. Advertising may have two possible effects: changes in the number of units sold, or changes in price per unit. To the extent that advertising caused an increase in the number of units sold, the results of the hedonic model, multiplied by total sales, takes this effect into account. (E.g., if the hedonic "Imported from Italy" premium were 15% and total sales were 10-million units sold at \$8 each,

totaling \$80-million, damages would be approximately \$12-million; if advertising caused the number of units sold to increase to 14-million, total sales increase to \$112-million, and accordingly, the damages calculation increases to approximately \$16.8-million).

82. To the extent that advertising caused an increase in the price of the product, this too is accounted for in the hedonic model. Advertising itself is not a product attribute. Advertising merely calls the product and its myriad attributes to the consumer's attention. As such, the hedonic model, which breaks the price of a product down into its component attributes, and in this litigation does so on a percentage basis, accounts for the effects of advertising (or indeed any other external factor that may affect price). If a product unit sells for \$8, and the hedonic "Imported from Italy" price premium is 15%, the model finds \$1.20 of the price to be attributable to the "Imported from Italy" Claim. If advertising caused that product to sell for \$15 instead, the same 15% coefficient finds that \$2.25 of the product's price was attributable to the "Imported from Italy" Claim.

83. Defendant may argue that advertising can upset the balance of the value of each of the underlying product attributes. However, the measurement of the value of underlying product attributes is exactly what hedonic regression does, and would account for such variations over time through the inclusion of price and attribute observations over time.

Omitted Variable Bias

84. As discussed in previous sections, Ugone suggests that my model may suffer from omitted variable bias. Omitted variable bias may occur when a relevant variable which is correlated with the main variable of interest is not included in a regression model. However, not all omitted variables cause bias.

85. As noted in The Reference Guide on Multiple Regression:

The importance of omitting a relevant variable depends on the strength of the relationship between the omitted variable and the dependent variable and the strength of the correlation between the omitted variable and the explanatory variables of interest. Other things being equal, the greater the correlation between the omitted variable and the variable of interest, the greater the bias caused by the omission.

Omitting variables that are not correlated with the variable of interest is, in general, less of a concern, because the parameter that measures the effect of the variable of interest on the dependent variable is estimated without bias.⁶⁶

86. As Rubinfeld explains, omitted variable bias does not arise simply by omitting a variable, but rather exists only when an omitted variable is strongly correlated with the main variable of interest *and* when economic theory suggests that the omitted variable has an effect on the dependent variable (i.e. the variable is "relevant").⁶⁷ Put differently, it is possible to omit a variable from a regression without repercussion when the focus of the regression (as in the case here) is on only one variable of interest, and if the omitted variable is not correlated with that variable of interest. Ugone himself cites a text reaching the same conclusion: "One exception [to omitted variable bias] is when the omitted variable is uncorrelated with the included variables."⁶⁸

87. Since Ugone has not identified any specific variables (other than "Cold Pressed" and advertising, which as discussed above are inappropriate for inclusion in this regression model) that may have a theoretical basis for inclusion in, or substantial effects on the results of the model -- there is no reason to believe that omitted variable bias is present in the preliminary model put forth in my first declaration.

⁶⁶ Daniel Rubinfeld, Reference Guide on Multiple Regressions, Federal Judicial Center, Reference on Scientific Evidence ("Rubinfeld"), at 314-315.

⁶⁷ Stock & Watson, at 231.

⁶⁸ Ugone Declaration, at footnote 161, citing Undergraduate Econometrics, Second Edition, Hill, R.C., Griffiths, W.C., and Judge, G.G.

Data categorization error

88. In his report, Ugone describes the results of my preliminary regression model as being "driven by a data categorization error."⁶⁹ Ugone claims that when this error is corrected, the results of my preliminary model change. After reviewing the data, I agree that a data categorization error was made as the result of a miscommunication between my team and Plaintiff's Counsel. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] As such, I have corrected the data mis-categorization. Ugone and I both agree that [REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

89. In addition to the sales data correction, I have also made various updates to the product attribute data used in my preliminary regression model, as I found several inconsistencies between the actual labels and IRI attributes after a review of the product labels (similar to the difference between IRI's coding of "Cold Pressed" as discussed in more detail above). I have rerun my preliminary model with these updates to the product attributes as well as the correction of the promotional sales categorization: contrary to Ugone's assertion, the

⁶⁹ Ugone Declaration, at para 72.

⁷⁰ Ugone Deposition, at 233.

promotion data categorization has little effect on the findings of my original preliminary regression model.

90. As discussed in paragraph 78 of this report, in his deposition Ugone states that

[REDACTED]

[REDACTED]⁷¹ Below I detail the updates I have made to the attribute data and also discuss the results of the updated regression model, which includes the correction of the IRI sales data promotional categorization.

Updates to product attributes

91. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] I have updated the above attributes to accurately reflect the statements made on their labels.

92. After updating the attribute data, I re-ran my original regression model -- the results are displayed in Table 7 below and Exhibit 2. Despite the fact that the data was updated to reflect more accurate labeling information, the specification of the model is *identical* to the model presented in my first report -- no new variables have been added to the model. As a result of changes in the coefficients of the regression model, I have also updated the corresponding price premium damages, which are presented in Table 8 below.

⁷¹ *Id.*, at 137.

IV. UPDATED REGRESSION RESULTS

<p>Table 7. Summary Updated Hedonic Regression Results</p>				
Premium Type	Claim Coefficient	Claim T-Statistic	Claim Price Premium	Claim Price Premium Factor
Extra Virgin/Italy (vs. Extra Virgin/Non-Italy)				
Extra Light/Italy (vs. Extra Light/Non-Italy)				
Olive Oil/Italy (vs. Olive Oil/Non-Italy)				

V. UPDATED DAMAGE CALCUATIONS

Table 8. Updated Damages Estimate			
Salov Product	California Retail Sales	Price Premium Factor	Damages
FILIPPO BERIO OLIVE OIL EXTRA VIRGIN REGULAR 16.9 OZ			
FILIPPO BERIO OLIVE OIL 100% PURE REGULAR 16.9 OZ			
FILIPPO BERIO OLIVE OIL 100% PURE REGULAR 50.7 OZ			
FILIPPO BERIO OLIVE OIL 100% PURE REGULAR 25.3 OZ			
FILIPPO BERIO OLIVE OIL 100% PURE REGULAR 34 OZ			
FILIPPO BERIO OLIVE OIL 100% PURE REGULAR 16.9 OZ			
FILIPPO BERIO OLIVE OIL EXTRA VIRGIN REGULAR 101.4 OZ			
FILIPPO BERIO OLIVE OIL EXTRA VIRGIN REGULAR 34 OZ			
FILIPPO BERIO OLIVE OIL EXTRA VIRGIN REGULAR 25.3 OZ			
FILIPPO BERIO OLIVE OIL EXTRA VIRGIN REGULAR 16.9 OZ			
FILIPPO BERIO OLIVE OIL EXTRA VIRGIN REGULAR 8.4 OZ			
FILIPPO BERIO OLIVE OIL EXTRA VIRGIN REGULAR 16.9 OZ			
FILIPPO BERIO OLIVE OIL EXTRA VIRGIN REGULAR 50.7 OZ			
FILIPPO BERIO OLIVE OIL EXTRA LIGHT REGULAR 34 OZ			
FILIPPO BERIO OLIVE OIL EXTRA LIGHT REGULAR 25.3 OZ			
FILIPPO BERIO OLIVE OIL EXTRA LIGHT REGULAR 16.9 OZ			
FILIPPO BERIO OLIVE OIL EXTRA LIGHT REGULAR 17 OZ			
FILIPPO BERIO OLIVE OIL EXTRA VIRGIN REGULAR 16.9 OZ			
FILIPPO BERIO OLIVE OIL EXTRA VIRGIN ROBUSTO 16.9 OZ			
FILIPPO BERIO OLIVE OIL EXTRA VIRGIN DELICATO 16.9 OZ			
TOTAL			

VI. RESERVATION OF RIGHTS

My testimony is based upon the information and data presently available to me. Additional, different and/or updated data including market research data may be obtained in advance of trial. I therefore reserve the right to amend or modify my testimony.

VERIFICATION

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief, and that this declaration was executed at Boston, Massachusetts, this 10th day of May, 2016.

A handwritten signature in dark ink, appearing to read 'C. B. Weir', is written over a horizontal line.

Colin B. Weir

Exhibit 1

Documents Reviewed

- Class Action Complaint, filed May 22, 2014
- Case, Fair & Oster, Principles of Microeconomics, 9th Edition, 2009
- *Product Attribute Saliency and Region of Origin: Some Empirical Evidence from Portugal*. Santos, Freitas J. and Ribeiro, Cadima J., Paper prepared for presentation at the 99th seminar of the EAAE (European Association of Agricultural Economists), 'The Future of Rural Europe in the Global Agri-Food System', Copenhagen, Denmark, August 24-27, 2005
- *Consumers' Preferences for Geographical Origin Labels: Evidence from the Canadian Olive Oil Market*. Menapace, Luisa, *et al*, European Review of Agricultural Economics 38(2) (2011):193–212
- Declaration of Keith R. Ugone, Ph.D., filed March 15, 2016
- Deposition of Keith R. Ugone, Ph.D., April 19, 2016
- Deposition of B. Thomas Mueller, October 21-22, 2015
- Deposition of David L. Scheiber, November 3, 2015
- Defendant's Opposition to Motion for Class Certification
- Frankel, E. N.; Mailer, R. J.; Wang, S. C.; Shoemaker, C. F.; Guinard, J.AX.; Flynn, J. D.; Sturzenberger, N. D Evaluation of Extra Virgin Olive Oil Sold in California, UC Davis Olive Center Publication, 2011
- Bates No. IRI_OliveOil_0001
- *Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition*. Rosen, Sherwin, The Journal of Political Economy, Vol. 82, No. 1. (Jan. - Feb., 1974)
- The use of hedonic regression in individual studies is too widespread to exhaustively document in detail. *See, e.g., The Expanding Role of Hedonic Methods in the Official Statistics of the United States*, Moulton, Brent R., Bureau of Economic Analysis, U.S. Department of Commerce, June 2001
- *The Use of Hedonic Analysis for Certification and Damage Calculations in Class Action Complaints*, Doane, Michael (Analysis Group) and Hartman, Raymond, Journal of Law, Economics, & Organization, Vol. 3, No. 2 (Autumn, 1987), pp. 351-372

- *See, e.g., In re: Scotts EZ Seed Litigation*, Case No. 12-cv-4727-VB, Dkt No. 127 (S.D.N.Y. January 26, 2015)
- *In re: ConAgra Foods Inc.*, Case No. 11-cv-05379-MMM, Dkt No 545 (C.D. Cal February 23, 2015)
- *Dei Rossi vs. Whirlpool*, Case No. 12-cv-00125-TLN, Dkt No. 160 (E.D. Cal April 28, 2015)
- *Developing a Hedonic Regression Model For Refrigerators in the U.S. CPI*, Shepler, Nicole, October 16, 2001, available at <http://data.bls.gov/cgi-bin/print.pl/cpi/cpirfr.htm> (last accessed February 24, 2015)
- *Organic and All Natural: Do Consumers Know the Difference?* Anstine, Jeffrey, *Journal of Applied Economics and Policy* 26.1 (2007):15-27
- *Hedonic Analysis of Retail Egg Prices*, Karipidis, Philippos I., *et al*, *Journal of Food Distribution Research* 36.3 (2005)
- *The Value to Consumers of Health Labeling Statements on Breakfast Foods and Cereals*, Muth, Mary K., *et al* Contributed Paper prepared for presentation at the International Associate of Agricultural Economists Conference, Beijing, China, August 2009, on behalf of RTI International and Food and Drug Administration, Center for Food Safety and Applied Nutrition. 10 March 2014
- *Hedonic Prices for a Nondurable Good: The Case of Breakfast Cereals*. Stanley, L. R. and John T. Tschirhart, *Review of Economics and Statistics* 73.3 (1991):537-541
- SNA-0014166-0014193
- SNA-0008691-0008711
- SNA-0005697-0005729
- SNA0011094-0011141
- SNA-0030646
- SNA-0030647
- SNA-0030648
- SNA-0030649

-SNA-0030650

-SNA-0030651

-SNA-0030652

- Baker, Jonathan B. and Timothy F. Bresnahan, *Economic Evidence in Antitrust: Defining Markets and Measuring Market Power*, Chapter 1 of Handbook of Antitrust Economics 2007, Cambridge: MIT Press, at 9

- Wang, S; Moscatello, B; and Flynn, D.; Survey : Consumer Attitudes on Olive Oil, UC Davis Olive Oil Center, May 2013

- www.stata.com

- *In re: Cellphone Termination Fee Cases*, Ramzy Ayyad, et al, Plaintiff, v. Sprint Spectrum, L.P., Defendant, JCCP No. 4332, Case No. RG03-121510

- Stock, J. H. & W. W. Watson, *Introduction to Econometrics* (3rd ed.), Boston: Addison-Wesley, 2011

- Daniel Rubinfeld, Reference Guide on Multiple Regressions, Federal Judicial Center, Reference on Scientific Evidence

- Kennedy, Peter., *A Guide to Econometrics* (5th ed.), Cambridge: MIT Press, 2003

- Greene, William H., *Econometric Analysis* (7th ed.), Prentice Hall, 2012

- Efficient Capital Markets: A Review of Theory and Empirical Work, Fama, Eugene, *The Journal of Finance*, Vol. 25, No. 2, Papers and Proceedings of the Twenty-Eighth Annual Meeting of the American Finance Association New York, N.Y. December, 28-30, 1969 (May, 1970)

- Carlton, D. W. & J. M. Perloff, *Modern Industrial Organization* (2nd ed.). New York: HarperCollins College Publishers, 1994

- Country-of-origin marketing: A list of typical strategies with examples, Thomas Aichner, *Journal of Brand Management* (2014) 21, 81–93.

- Product labels

Exhibit 2

Regression Results

Salov Updated Regression Results: 2nd Quarter 2010 - 2nd Quarter 2014

[illegible]

Observations	
Adjusted R-squared	
F-Statistic	
RMSE	
F-Test of Italy/Category of Olive Oil Coefficients	
F-Test p-value	
Premium from Extra Virgin/Italy over Extra Virgin/None	
Premium from Extra Light/Italy over Extra Light/None	
Premium from Olive Oil/Italy over Olive Oil/None	

Note 1: T-Statistics displayed in parenthesis are calculated using robust standard errors.

Note 2: Regression model is weighted by number of units sold.

Significance levels: * p<0.10; ** p<0.05; *** p<0.01

Source: IRI Sales Data.